

REMARKS

This is in response to the Office Action of February 8, 2011. Contrary to the Office Action summary page, 1, 12, 15-26, 36, and 37 were pending in the application, of which claims 1, 15-22, and 25 stood withdrawn from consideration and claims 12, 23, 24, 26, 36, and 37 were before the Examiner for consideration on their merits. Claim 12 is now cancelled, without prejudice. Claims 23 and 26 are amended to specify that the nonionic water-soluble macromolecule is a poly(ethylene glycol mono(meth)acrylate-photoreactive acrylamide) copolymer. No new matter is introduced by this Amendment. Claims 1, 15-26, 36, and 37 are now pending in the application, of which claims 1, 15-22, and 25 stand withdrawn from consideration and claims 23, 24, 26, 36, and 37 are before the Examiner for consideration on their merits.

Prior art rejection

Claims 12, 23, 24, 26, 36, and 37 were rejected under 35 U.S.C. § 103(a) as being unpatentable over US 2001/0014448 A1 (Chappa) in view of US 6,706,260 B1 (Tanaka). Office Action, pages 2-4. The rejection is respectfully traversed as to claims 23, 24, 26, 36, and 37 hereinabove.

The Examiner relies upon the fact that Chappa discloses a polymer backbone comprising polymethylacrylamide-photoreactive methacrylamide copolymers. As amended hereinabove, Applicants' independent claims 23 and 26 require that the nonionic water-soluble macromolecule is a poly(ethylene glycol mono(meth)acrylate-photoreactive acrylamide) copolymer. Poly(ethylene glycol mono(meth)acrylate-photoreactive acrylamide) copolymers are neither taught nor suggested by Chappa.

Regarding claims 23, 24, and 26, the Examiner contends that paragraphs [0032], [0033], and [0038] disclose a naturally occurring macromolecule (the Examiner uses the language "nonionic naturally occurring water soluble photoreactive polymer") which meets that limitation of claim 23. This ground of rejection as it is stated by the Examiner is overcome by deletion of the embodiment "naturally occurring macromolecules" from claims 23 and 26.

As demonstrated experimentally in Example 8 of Applicants' specification (see, e.g., Table 3 on page 28), by using poly(ethylene glycol mono(meth)acrylate-photoreactive

acrylamide) copolymers, non-specific binding is inhibited significantly, which permits accurate assays to be carried out.

Regarding claims 36 and 37, the Examiner contends that Tanaka discloses poly(ethylene glycol mono(meth)acrylate-photoreactive acrylamide) copolymers in lines 51-63 of column 5. Tanaka discloses monomers therein, including polyethylene glycol mono(meth)acrylate. However, he does not directly disclose photoreactive acrylamide copolymers thereof in lines 51-63 of column 5. To assemble poly(ethylene glycol mono(meth)acrylate-photoactive acrylamide) copolymer from the parts mentioned in lines 51-3 in column 5 of Tanaka would require impermissible hindsight.

Also, Tanaka requires a combination of monomer (a) and monomer (b). To intentionally excise a part of the invention of Tanaka – as would be required by the Examiner's proposed combination of the Tanaka and Chappa technologies – is also impermissible.

Moreover, Tanaka is directed to a wound-covering preparation, which use is utterly different from that of the present invention (preparation of microarrays). Therefore, to combine the Tanaka disclosure with the Chappa disclosure is also based only on impermissible hindsight.

Both Chappa and Tanaka are silent as to the use of poly(ethylene glycol mono(meth)acrylate-photoreactive acrylamide) copolymers, as well as to the unexpected superior effects obtained thereby demonstrated in the present record. Accordingly, claims 23, 24, 26, 36, and 37 are manifestly patentable over the cited references. Withdrawal of the rejection of record based on the Chappa published application in view of the Tanaka patent is in order and is earnestly solicited.

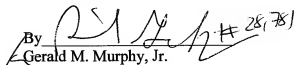
Contact information

If there are any questions concerning this application please contact Richard Gallagher, Registration No. 28,781, at (703) 205-8008.

If any additional fee is determined to be necessary in connection with this response, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to our Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. § 1.16 or under § 1.17; particularly, extension of time fees.

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Respectfully submitted,

By  28,977

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